

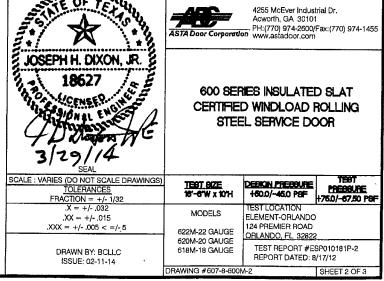
all weld	spacings	are	maxim	umsani

								all Well	i spacings are maxim	unio
Series   Door ID	oor ID Slat Tes		Tested Design Wind Load		slip Slot		Weld in Slot Only	Weld in Slot plus Fillet Weld at Toe		
	]	gage	Door*	Pos	Neg		size	min. 3/16" jamb	3/16"	
			16'-6" wide	psf	psf ·	in		in slot only	in slot	at toe
	1/4" Stan	dard Wa	II Angle					}	slot and toe we	lds staggered
600	618M	18		50.0	45.0	0.625	9/16" x 3/4"	1/4" fillet weld**	1/4" fillet weld**	1/4 x 1-1/2
	620M	20		50.0	45.0	0.625	9/16" x 3/4"	12" o.c.	12" o.c.	12" p.c.
	622M	22	Test	50.0	45.0	0.625	9/16" x 3/4"	1		

<sup>\*</sup> doors tested with 1/2" bolts @ 12" o.c. connecting to 3/16" steel jamb per drawing

## **GENERAL NOTES:**

- STEEL USED FOR SLATS IS ASTM-A653 WITH MINIMUM YIELD OF 50 KSI AND TENSILE OF 60 KSI.
- GUIDES COMPOSED OF STRUCTURAL STEEL ANGLES WITH MINIMUM YIELD STRENGTH OF 36 KSI.
- 3. INSULATION TO BE 5/8" POLYSTYRENE FOAM. EFFECTIVE INSULATING VALUE R= 5.0.
- 4. THE WINDLOCKS ARE ATTACHED TO EVERY OTHER SLAT BEGINNING AT THE BOTTOM SLAT. WINDLOCKS ARE ATTACHED USING TWO 1/4" RIVETS.
- 5. THIS DOOR HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND THE INTERNATIONAL BUILDING CODE. THE DESIGN WIND PRESSURES REQUIRED FOR ANY DOOR SHALL BE DETERMINED USING THE APPROPRIATE SECTION OF THE CODE HAVING JURISDICTION WHERE THE BUILDING IS LOCATED.
- 6. THIS DOOR HAS BEEN SUCCESSFULLY TESTED TO: -THE UNIFORM STATIC AIR PRESSURE TEST PER ASTM E-330 AND ANSI/DASMA 108 TO A DESIGN LOAD OF +50.0 & -45.0 PSF -REFERENCE ELEMENT-ORLANDO, TEST REPORT #ESP010181P-2, DATED: 8/17/12.
- 7. BOTTOM BAR ASSEMBLY FASTENED 5 3/4" FROM EACH END AND 12" O.C. FROM CENTER USING 5/16" x 1" CARRIAGE BOLTS.



<sup>\*\*</sup> fillet weld around full perimeter of slot

<sup>\*\*\*</sup> no spacings exceed the fastener spacing of the test

622M Insulated Slat Door also 620M and 618M

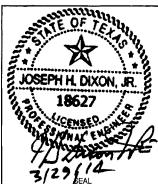
Summary of Catenary Forces for alternative doors Compared to Element Materials Technology Report No.: ESP010181P-2, dated 08/17/12 Rolling Steel Slat Door (Insulated Slat)

Test Door: 16'-6" wide x 10' high, Design Windload +50 / -45 psf

Static air pressure test conducted in accordance with ASTM E330-02 and DASMA 108-05

Width Design Insulated Slat Door								
Ĭ	vviatn	l.	•	Insulated Slat Door				
	Windload				<del>y</del>			
		Pos	Neg	Model	gage			
	ft	psf	psf		in			
16'-6" x 10'-0"								
Test Door	16.5	50	45	622M	.029 / .022			
				620M				
Calibration calcul	ations for t	est door		618M				
Comparative for	ces by cal	culation						
to determine ma	•		ure		ļ			
Max Door Size					]			
8 x 30	8	85.6	78.1	622M	.029 / .022			
9 x 30	9	85.6	78.1	622M	.029 / .022			
10 x 30	10	85.6	78.1	622M	.029 / .022			
11 x 30	11	85.6	78.1	622M	.029 / .022			
12 x 30	12	85.6	78.1	622M	.029 / .022			
12'-6" x 30	12.5	85.6	78.1	622M	.029 / .022			
13 x 30	13	79.1	72.0	622M	.029 / .022			
14 x 30	14	68.3	61.9	622M	.029 / .022			
15 x 30	15	59.8	54.0	622M	.029 / .022			
16 x 30	16	52.9	47.7	622M	.029 / .022			
16'-6" x 30	16.5	50.0	45.0	622M	.029 / .022			
17 x 30	17	47.4	42.6	622M	.029 / .022			
18 x 30	18		38.3	622M				
		42.7			.029 / .022			
19 x 30	19	38.8	34.7	622M	.029 / .022			
20 x 30	20	35.4	31.6	622M	.029 / .022			
20'-6" x 30	20.5	33.9	30.3	622M	.029 / .022			

Design wind forces are calculated to produce catenary forces at the guides equal to or less than those calculated for the test door. This indicates that the curtain, windlocks, windlock connections, guide angles, and jamb anchorages will all be stressed to approximately the same as those in the test door, provided that the door is constructed the same for all opening widths.





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SHEET 3 OF 3

## 600 SERIES INSULATED SLAT CERTIFIED WINDLOAD ROLLING STEEL SERVICE DOOR

SCALE: VARIES (DO NOT SCALE DRAWINGS) <u>DESIGN PRESSURE</u> TEST SUE TOLERANCES 16'-6"W x 10'H 150.0/-45.0 PSF +75.0/-67.50 PSF FRACTION = +/-1/32TEST LOCATION X = +/-.032MODELS ELEMENT-ORLANDO .XX = +/-.015124 PREMIER ROAD XXX = +/-.005 < =/-.5622M-22 GAUGE ORLANDO, FL. 32822 620M-20 GAUGE TEST REPORT #ESP010181P-2 618M-18 GAUGE DRAWN BY: BCLLC REPORT DATED: 8/17/12 ISSUE: 02-11-14

DRAWING #607-8-600M-2

Summary of Catenary Forces for alternative doors for TDI (TEXAS)

Compared to Element Materials Technology Report No.: ESP010181P-2, dated 08/17/12

Rolling Steel Slat Door (Insulated Slat)

Test Door: 16'-6" wide x 10' high, Design Windload +50 / -45 psf

Static air pressure test conducted in accordance with ASTM E330-02 and DASMA 108-05

	Width	Design Windload		Insulated Slat Door		Catenary Force		Slip	Remarks
	ft	Pos psf	Neg psf	Model	gage in	Pos wind plf	Neg wind plf	in	
16'-6" x 10'-0" Test Door  Calibration calcul	16.5	50°	45	622M	.029 / .022			0.005	Test Door Design test pressure: +50 / -45 psf Max test pressure: +75 / -67.5 psf
Calibration calcul	ations for te	st door				1773	1554	0.625	€.
Comparative for to determine ma			ıre						All doors constructed same as test door
Max Door Size									
8 x 30 9 x 30 10 x 30 11 x 30	8 9 10 11	85.6 85.6 85.6 85.6	78.1 78.1 78.1 78.1	622M 622M 622M 622M	.029 / .022 .029 / .022 .029 / .022 .029 / .022	≤1771 ≤1771 ≤1771 ≤1771	≤1552 ≤1552 ≤1552 ≤1552	0.375 0.375 0.625	Forces <= test door, OK
12 x 30 12'-6" x 30 13 x 30	12 12.5 13	85.6 85.6 79.1	78.1 78.1 72.0	622M 622M 622M	.029 / .022 .029 / .022 .029 / .022	≤1771 1771 1772	≤1552 1552 1552	0.625 0.625 0.625	Forces <= test door, OK Forces <= test door, OK Forces <= test door, OK
14 x 30 15 x 30 16 x 30	14 15 16	68.3 59.8 52.9	61.9 54.0 47.7	622M 622M 622M	.029 / .022 .029 / .022 .029 / .022	1772 1773 1771	1553 1554 1553	0.625 0.625	Forces <= test door, OK Forces <= test door, OK Forces <= test door, OK
16'-6" x 30	16.5	50,0	45.0	622M	.029 / .022	1773	1554	0.625	Test Door
17 x 30 18 x 30 19 x 30 20 x 30 20'-6" x 30	17 18 19 20 20.5	47.4 42.7 38.8 35.4 33.9	42.6 38.3 34.7 31.6 30.3	622M 622M 622M 622M 622M	.029 / .022 .029 / .022 .029 / .022 .029 / .022 .029 / .022	1774 1774 1774 1774 1774	1555 1555 1554 1555 1555	0.625	Forces <= test door, OK

Design wind forces are calculated to produce catenary forces at the guides equal to or less than those calculated for the test door. This indicates that the curtain, windlocks, windlock connections, guide angles, and jamb anchorages will all be stressed to approximately the same as those in the test door, provided that the door is constructed the same for all opening widths. Slat thicknesses for Models 620M and 618M are 0.036"/0.022" and 0.045"/0.033" respectively

